

## Heavy Metal Detox Protocol

Ideal for past and present Smelter Town Kids and others who have lived in contaminated environments. Can also be used before, during and after removal of Amalgam Fillings.

**Full Protocol** (Others in Appendices)

### Breakfast:

15 minutes before: 1 by 1000 mcg of methyl B12 taken sublingually (ie- let it dissolve under your tongue.) Stir ½ pouch of lyposomal glutathione and ½ tsp prebiotic powder into about 1/5 of a cup of juice. Take one probiotic capsule with it, or use Kefir on your breakfast cereal. Or if you have time, instead of the lyposomal glutathione, use nebulised glutathione before or after breakfast. (See notes below...)

Early during meal (taken with orange or carrot juice containing 1 level tsp MSM powder and 1/4 tsp zinc solution): 1 capsule digestive enzymes, 4 x 500mg chlorella tablets (see notes below), 1 x 600mg kelp capsule, 1 multi-vitamin-mineral tablet, 1x 500mg eggshell membrane tablet, 1 x 1000mg fish oil capsule, 1 x 650 mg cod liver oil capsule, 1 capsule trace minerals (and 2 x 22mg zinc tablets if you don't have the zinc solution). One teaspoon of olive leaf extract after breakfast. I also take 1 tablespoon psyllium husks on breakfast cereal or in the juice (it makes the juice gel, so you will need to also add water. **-Caution:** Do not eat these husks dry as they can swell up in your throat.)

### Lunch:

Before lunch: Reduced glutathione powder -either one 250 mg capsule emptied onto a teaspoon, or 250 mg of pure glutathione from bulk powder on a teaspoon (1/8th of a teaspoon) - taken sublingually (ie- beneath tongue - put the spoon under your tongue and touch your tongue against the spoon. Remove the spoon, let the glutathione dissolve under your tongue and on your mouth under your tongue, wait about 30 seconds for it to absorb, and then repeat until it is all gone. Early during meal (with water or carrot/veggie juice): 1 capsule digestive enzymes, 3 x 500mg chlorella tablets, 1 calcium & magnesium tablet, & 1 Alpha-Lipoic Acid capsule

### Dinner:

Either: A: 15 minutes before: Stir ½ pouch of lyposomal glutathione and one heaped teaspoon of Acai berry powder into about 1/5 of a cup of water and drink it. Or B: Glutathione sublingually as at lunch, taken at any time before dinner. Or C: use nebulised glutathione during the evening (See notes below...)

Early during meal: 1 capsule digestive enzymes, 3 x 500mg chlorella tablets, 1 kelp capsule, 1 iron capsule (see notes), 1 x 500mg vitamin C tablet, 1 x 400IU vitamin E capsule, 1 CoQ10 capsule, 1x 3mg boron capsule, 1 cod liver oil capsule and 1 x 1000 IU vitamin D3 tablet. Finally take either 1 De-Mer-Tox capsule or a combination of 1 x 100mcg selenium tablet and 1 x 600mg NAC capsule.

### Before Bed:

Glutathione powder, sublingually as at lunch. Then 1 tsp chlorella powder (or 3 x 500mg chlorella tablets, crushed), 1 tsp acai powder and 1/5th tsp tumeric powder, all put into about 1/5 cup of water in a jar and shaken to disperse it.

**Food:** Remember- most of the above are only supplements to boost an already adequate normal diet while you are detoxing. The boosting is required to help your body compensate for its heavy metal (and also herbicide, pesticide, plasticiser, etc) damage and have what it needs to be able to remove the metals and then repair as much of the damage as possible. Eat lots of fresh and freshly cooked veggies -esp high sulphur items like broccoli, kale and cabbage, eggs with runny yolks, yoghurt, complete protein meats like sardines, wild salmon and free-range chicken, parsley, coriander, carrot juice, etc. Avoid high-mercury fish like tuna. If possible, eat a gluten-free or at least a low gluten diet and eliminate or minimise empty calories like refined sugar, white rice and soft drinks as well as refined salt and chemicals such as sugar substitutes and artificial flavours and colours. Have some nuts or a piece of fruit instead. Try to have about 30% of your food raw. Use Himalayan pink or Celtic gray salt which contains all of the sea minerals, not just sodium. Eat normal fat cheeses, etc (avoid the low-fat versions) and use avocados, olives, butter, olive oil and coconut oil liberally to supply your body and brain with the quality fats they need to heal and function well. Cut back hard on 'empty carbs' to keep your total calories right. Natural probiotics are also good, such as yoghurt, homemade kefir and raw sauerkraut. Carrot Juice: make it yourself fresh. Use mainly carrots, but add what you like. I often add celery, apples, kale and ginger. -In summary, eat your food whole as God has provided it for us -not with most of its nutrients processed out. And use variety to make it enjoyable and to provide all the nutrients you need.

**Details:** Examples of various supplements available to me in Australia (use any similar item):

**Methyl B12** – initially a 2500mcg tablet such as that by NutriVital. Another option is Doctor's Best 1000mcg "Chewable Fully Active B12", which should be dissolved under your tongue rather than chewed, as this will make more B12 available to your body.

**Prebiotic:** eg: Bioceuticals Intestamine contains mastic tree gum, tumeric, aloe vera, slippery elm, glutamine, citrus, pectin.

**Probiotic:** eg: Bioceuticals UltraBiotic 45 contains Lactobacillus rhamnosus, casei, acidophilus, plantarum, fermentum, Bifobacterium lactis, breve, bifidum and Streptococcus thermophilus.

**Digestive enzymes** Thompson Digestion Manager contains amylase, protease, Bromelain, Lipase, Tilactase, cellulase, Papain, ginger and peppermint powder or Bioceuticals Multigest, etc. Note that Multigest is almost three times as strong as the Thompson, so if you need more enzymes, you may need to use the Multigest.)

**Liposomal Glutathione:** Lypricel 450 mg sachets - from Iherb.com. This works well, but is quite expensive and can sometimes be substituted with sublingual or nebulised glutathione as discussed below.

**Eggshell Membrane:** eg. Healthy Origins Natural Eggshell Membrane, Provides ingredients to promote healthy joints, helps delay and reduce arthritis.

**MSM powder:** Methyl Sulfonyl Methane- eg: Megaburn from a health food shop.

**Zinc drink:** Metagenics contains 50 mg zinc sulfate per ml, or chelated zinc tablets (eg Solgar, 22 mg zinc). My toxicologist specifies a higher amount of zinc than this protocol recommends.

**Chlorella:** Melrose Organic 500 mg tablets (make sure yours has high digestibility) You can slowly reduce the number of these as your heavy metal levels decline.

**Kelp:** preferably *Ascophyllum nodosum*. Eg: Nature's Way 600 mg kelp from Iherb.com. As well as helping protect you from reabsorbing heavy metals that are being sent to your gut for removal, they provide many minerals, especially iodine which you need to have healthy thyroids.  
Multi-vitamin-mineral tablet: Cenovis 50 plus Multi or equivalent. Make sure it is a good quality tablet which contains significant amounts of B vitamins, selenium, boron, etc.

**Boron** capsule or tablets, 3 mg, may need to get from iherb.com or similar. See notes below.

**Cod Liver Oil**, 650 mg. Eg NOW Foods.

**Trace Minerals:** -only if you have deficiencies in trace elements. Thorne's suits my needs. Make sure it contains the elements you are deficient in. Your mineral analysis should indicate these.

**Olive Leaf Extract:** eg: Fauldings 'fresh' liquid

**Glutathione** powder (use the pure reduced form only): eg: BulkSupplements.com. When used sublingually, use a 1/8th teaspoon and just tap it against the underside of your tongue and let it dissolve. See below for using it in a nebuliser. And be careful when purchasing: glutathione is completely different to glutamine.

**Calcium & magnesium:** eg. NOW Foods, contains 1000 mg calcium and 500 mg magnesium per tablet

**Acai** powder: Freeze-dried powder from health shop. A less expensive and more enjoyable alternative is dried blueberries, eaten as a small snack during the day. Both contain powerful antioxidants.

**ALA** (alpha-lipoic acid): Healthy Origins or NOW brand contains 600 mg ALA per cap

**Iron:** 5 to 10 mg as iron fumarate or other easily digested form, usually supplied with supporting vitamins. - and read caution in Notes below...

**CoQ10:** eg: Cenovis or Doctor's Best Coenzyme Q10, 100 mg

**Vitamin D3:** 1000 or 2000 IU. Double this amount when you cannot get sun exposure for an extended period. Note that Osteoporosis Australia recommends most people should have a vitamin D level of at least 50 nmol/L at the end of winter, which means people may have levels of 60 to 70 nmol/L during summer.

**Vitamin E:** -use natural Tocopherols, about 400 IU

**De-Mer-Tox:** by Douglas Laboratories - from Dentist- mix including B vitamins, selenium and NAC.

**Selenium:** 100 mcg

**NAC;** N-Acetyl Cysteine, 600 mg. Eg. from NOW -via Iherb.com

**Sea Minerals:** Supa-Boost (or Ultra-Boost) by Amena. -Concentrated sea minerals with reduced sodium and aluminium. Add up to one teaspoon to a 750ml water bottle -and drink it each day. It is important to stay well hydrated while detoxing. Do not take mineral supplements with high levels of toxic aluminium

such as King Island or Wallach's Utah "Colloidal Minerals". (Be careful of Wallach; many of his 'facts' are not true.)

**Notes:** I was born in a contaminated smelter town (Flin Flon, Canada) and lived there until I was 12. I left there filled with arsenic, cadmium, lead, mercury, etc and damaged lungs. I was already taking the fish oil, glucosamine, psyllium husks and a multi-vitamin-mineral tablet before I realised (fifty years later) that I was probably full of heavy metals. I went to a toxicologist, who ran tests and confirmed that I was still badly contaminated with their heavy metals. He said to continue taking the supplements. They help stabilise my guts, reduce my Irritable Bowel Syndrome symptoms and reduce my joint pain.

I added, with the toxicologist's agreement, the Acai, ALA, CoQ10, kelp, calcium and boron. The extra boron is because my urine tests showed I had almost no boron in my body, despite eating many foods that should contain boron. It seems that low boron is common in many western nations, and is often an underlying cause of arthritis. If the multi-vitamin-mineral you take does not contain boron, you will need to take it separately. The ALA and Acai are to boost my antioxidants which should help restart my body's ability to detoxify itself. An optional extra is 1 x Methyl-Guard capsule (by Thorne) at breakfast, which is mostly extra B-vitamins, which the toxicologist says will give me an energy boost.

Most of the rest are his prescriptions for me, based on tests on me that he has seen or had done on me, including various blood tests, hair analysis and physical examinations. His intention is to get my digestive system, and then all of my other body systems including my heavy metal detox system working.

I began using a glutathione based detox protocol after my toxicologist's DMSA based system made me sick. Though he insists that his synthetic chelators are quicker than the glutathione, I already have damaged kidneys and find that the DMSA makes everything worse as it removes the heavy metals via the kidneys and urine. In contrast, the glutathione protocol actually makes me feel better even while I am detoxing.

The chlorella, sea minerals and De-Mer-Tox were added by my dentist (Peter Didaskalu), who removed my 'silver' amalgams. Do NOT get an ordinary dentist remove your amalgams, as they are about 50% mercury and will release dangerous amounts of mercury into your body in the process. You must find a "biological dentist" who believes, and will tell you, that the mercury in amalgam fillings is toxic and they never stop releasing mercury. They will have special techniques and high air-flow suction devices to remove the mercury vapour and use mercury capturing masks to protect themselves and you from the mercury that escapes despite this equipment. Go to IAOMT.org or amalgam.org to learn more. The supplements are part of Peter's normal procedure to help his patients remove the mercury from their bodies. Several months after all my amalgams were removed he added cilantro (coriander) to this to begin removing the mercury, etc from my brain once most of the mercury was gone from my body. Double the chlorella on the day before you get amalgams removed, and continue this double amount for three more days. Six to nine months after having all amalgams removed, try reducing the chlorella to 2 tablets each time.

**Chlorella:** Some people can have a reaction to the chlorella. It is best to start on one tablet at each session and each day add another one until reaching the 3 (6) if all is going well. As your detox proceeds, you can slowly reduce the number of chlorella tablets you take each day.

**Iron:** usually keep caffeinated drinks away from meals when iron is taken as it inhibits the absorption of the iron. Only take iron if you have been tested and have low iron levels, especially as you get older.

Keep watching your iron levels, as the chelation can also remove your iron. And remember that the oxalic acid in silver beet prevents you from absorbing most of the iron in it, so don't rely on it for your iron.

The chlorella and kelp tend to lock onto any mercury or other heavy metals that get into your gut either via your food, or via your bile which is your body's preferred way of removing heavy metals. -so they are protective. Vitamins B, D and E tend to protect you from heavy metals that are still in your body or in the process of being removed.

**Glutathione:** MSM helps provide sulphur so your body can make glutathione, metallothione and other enzymes that help you capture and remove heavy metals via your intestines. The nebulised, sublingual and lyposomal glutathione are direct additions of glutathione that help if your body is struggling to make glutathione, which is common in people who have been damaged by heavy metals, according to my toxicologist. The nebulising, lyposomal and sublingual methods help you absorb it, because it is normally mostly broken down into amino acids in your digestive system if you simply swallow it.

If you still have or have just gotten rid of dental amalgam fillings, the lyposomal glutathione should be very beneficial as the glutathione embedded in the liposome is released into your bloodstream surrounding your small intestine. At this location, its first effect is to help capture and remove the heavy metals which have been absorbed by your "second brain", that is, your extensive nervous system that controls your digestive system and its associated organs. As your gut brain becomes less contaminated, the effectiveness of your digestive system will improve, allowing more nutrients to be absorbed into your body. The sublingual glutathione is initially released in your mouth, allowing some detox of mercury in the tissues in your mouth. The absorbed glutathione is taken up by the blood vessels in your mouth, carrying it initially through your head. This allows heavy metal removal to begin there, and the glutathione also becomes available to your brain, especially the bedtime dose as your brain detoxes while you are asleep. The rest of the glutathione is carried in your saliva into your digestive system. If you are healthy enough to make glutathione yourself, ingesting it does provide the ingredients your body requires, and so may provide a sustained lift in your glutathione levels.

A few weeks after your amalgams are gone, it may become OK to use the less expensive nebulised or sublingual glutathione 3 times a day and phase out the liposomal glutathione. However, I find that taking the sublingual glutathione once or twice a day is fine, but 3 or 4 times a day tends to irritate the skin under my tongue.

**Nebulised Glutathione:** A highly effective way to boost your glutathione levels is to inhale it as a nebulised mist. This is especially helpful if you have lung problems such as COPD, as the glutathione both detoxes and helps strengthen your lungs. Details on this are in Appendix 1.

**Minerals:** The various mineral supplements give your body everything it needs to backfill the places that the heavy metals are being removed from with the proper metals that should have been there, such as calcium, iron, magnesium, selenium, zinc, iodine, etc. -note that the iodine mainly comes from the kelp. The iodine helps those with sluggish thyroids, but the dose should be controlled for those with damaged or hyperactive thyroids. To ensure your diet has adequate minerals in it, I have been told to ditch my ordinary refined table salt and replace it with either Celtic or Himalayan salt which contains many minerals. My dentist has also told me to take the sea minerals mentioned above. It is called Supa-Boost Sea Minerals (made by Amena), which is concentrated sea water which has had most of the sodium removed and some herbs added. I add most of a teaspoon of that to my drink bottle each day.

The antioxidants in the Acai berry, ALA and olive leaf extract tend to deal with the free radicals in your body, and thus allow the glutathione to concentrate on removing the heavy metals.

The lyposomal glutathione and probiotic are taken before a meal so they can get through the stomach while it is relatively inactive and less acidic to minimise damage to them on the way through to the intestines. Conversely, the other tablets and capsules are timed to enter the stomach once it has been activated by eating, so they will be fully broken open and mixed in the stomach and not pass through your small intestine without being absorbed. -but they are better taken late instead of not at all when the timing doesn't work out...

**IBS (Irritable Bowel Syndrome)** - some of the above are designed to control my IBS and may not be needed by someone without IBS. For that I take the psyllium husks, prebiotics, probiotics and digestive enzymes. These, combined with a gluten-free diet that is also very low in lactose and low in FODMAPS, work well for me, almost eliminating my bowel cramps and gas and allow me to have normal bowel activity and absorb more nutrients from my food. Some of the mineral supplements are to help me overcome my pre-existing low mineral levels due to my life-long IBS, which is another childhood 'gift' to me from the Hudson Bay Mining and Smelting Company via their toxic smelter emissions in Flin Flon, Manitoba, as is my emphysema. You can learn more about this at [www.smelertownkids.net](http://www.smelertownkids.net).

Others are taken due to my age (currently 67): Eggshell membrane, CoQ10, olive leaf and fish oil for example, which are good for aging joints and the heart. It seems that glutathione is also beneficial in this way too. To my surprise, as I continue with this protocol, my back and joint pains have not merely stabilized, but have almost totally disappeared.

Recent research indicates that this protocol may also be helpful for people with Subjective Cognitive Impairment (SCI I have SCI, which is also likely due to the smelter emissions) or Mild Cognitive Impairment (MCI) and more severe neurological diseases such Alzheimer's, Parkinson's, MS, restless legs, etc. -especially if they start following it before the disease is too advanced. Read the new *End of Alzheimer's* book by Dale Bredezen, which presents a more detailed and likely more effective treatments targeting these diseases. Migraines, insomnia and rheumatoid arthritis may also be relieved by this protocol.

My experience has been that the synthetic chelation agents used on me (DMSA and IV EDTA) caused me to lose much of my stamina and intensified a broad range of Alzheimer-like symptoms. The natural chelators, etc, used in this protocol are slowly restoring my energy levels and as the heavy metals are removed my brain, the SCI symptoms are becoming less severe and less frequent. My hope and prayer is that when most of the heavy metals are gone, I may perhaps not go on to develop dementia as many 'smelter town kids' do as they age. Make sure your family knows that these symptoms may appear as your brain begins to detox and have them encourage you to keep on with the detox program. After a few months your brain should be healthier than it has ever been. In my case, after a couple of months on this protocol, my "Brain babble" stopped. I never knew that the constant random babble interrupting my thoughts was not normal until it stopped, as I had it all my life. It is so amazing to no longer have to constantly sift through all the noise to follow a coherent train of thought. Now I am working on controlling my related 'mouth babble'! (Still working on that!)

**Sweating** is also another powerful way to get rid of toxins, and one which doesn't put more load on your kidneys and liver. If you are like me, and are usually the last person in a group to start sweating, it indicates -as also does being easily chilled in cold weather- that your body heat regulation metabolism is damaged. You need to work on getting your body sweating again. Exercise followed by a sauna will often get your sweat glands going, or working outside in hot weather will help. (But be reasonable -drink

lots of water and don't stay out so long that you get sunstroke.) Ideally, shower soon after sweating to ensure that the toxins are not reabsorbed through your skin. As your body detoxes, your ability to sweat (and cope with cold) should improve, as mine has been doing.

**Sunshine** will also help your body and brain to heal. When possible, expose your head and upper spine to the sunshine, for example by walking or working in a garden early or late in the day if you live in an area where the ozone layer is damaged. The benefits extend beyond just improving your vitamin D levels. (Note that the ozone hole is largest in late winter and throughout spring, so you need to be extra careful then.)

Once almost all of the heavy metals are removed, it is possible to scale most of the above back to a low maintenance dose to avoid accumulating more heavy metals and other toxins from your environment (See the Appendices). It took me about 30 months for me to reach that point. I now have a normally functioning thyroid (previously always below the bottom of the normal range) and normal fasting blood sugar (previously always above the normal range, but below that of a diabetic) for the first time in my life. But if I had begun with this version of the protocol, I think I would have been substantially detoxed within two years.

This protocol will not remove arsenic, as our bodies use different pathways to trap and remove it. But as the other toxic metals are removed, it is likely that your body will become healthier and more efficient at removing arsenic.

Try to keep stress in your life to a beneficial level. Excess stress and overwork will make your IBS, Alzheimer-like symptoms, etc worse. You need gentle exercise and adequate sleep to help your body heal.

If you already have cancer, you will need to discuss this protocol with your oncologist as some antioxidants may promote cancer growth. If you do not have cancer yet, the protocol may make you less likely to develop it by improving your health.

I would also like to say that I believe that Jehovah God has helped me develop this protocol, leading me to the various people and research papers whose ideas have been incorporated into it. You can learn more about my God at [www.chcpublications.net](http://www.chcpublications.net). I am confident that this protocol will be of benefit to many people in addition to me. But remember that these supplements are merely supporting physical healing, and some things, like my IBS and COPD, are really only being controlled by this protocol and I may need to take digestive enzymes, glutathione, etc, for the rest of my life. In contrast, my Lord Jehovah can heal you miraculously, instantly and totally; body, soul and spirit together.

This full detox protocol costs about \$220 AUD per month or \$2667 AUD a year for the supplements. The Appendices have less expensive protocols which should work almost as well for people on limited incomes, plus other protocols for post-detox maintenance and COPD relief.

And of course my disclaimer: This is only what I am doing to get rid of my heavy metals and stabilise my health and memory problems. You should consult with your dentist/ doctor/ toxicologist about doing this. Hopefully you can find helpful ones.

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## **Appendix 1: Mixing and Nebulising Glutathione**

Inexpensive nebulisers can be ordered from Ebay for about \$50 or better, longer-lasting, ones bought from your local pharmacist for about \$140. You must use pure reduced and buffered glutathione powder in it, prepared as below.

**Sources:** Use good quality sodium bicarbonate (aka Bicarb soda) from the supermarket. NEVER use sodium carbonate (washing soda), which will harm your lungs. The bicarbonate is essential to both keep the glutathione in its active state and to buffer it so you can inhale the glutathione without coughing.

Use good quality, pure L-Glutathione reduced powder from BulkSupplements.com or a similar reputable company.

**WARNING!** Nearly all the pre-encapsulated glutathione you can buy has other ingredients added to it as manufacturing aids (excipients) to make the powder flow better and bulk up the capsule fill. Most of these excipients are damaging to your lungs, such as silicon dioxide, silica and magnesium stearate. Although these may be OK in capsules you swallow, it is a major problem for inhaled nebulised mists. The excipients should be listed under “Other Ingredients” on the back label, but not all manufacturers are careful about this, as they usually only intend their product to be swallowed. I was injured by mislabeled capsules and now only use pure, good quality reduced L-glutathione bought as a bulk powder from BulkSupplements.com or similar supplier.

### **Mixing Procedures:**

#### **Bought capsules:**

If you can find truly pure glutathione capsules, use a 250mg (or half of a 500 mg) capsule and about 1/10 that volume of sodium bicarbonate to buffer the glutathione. About half of the short capsule cap filled would be about right for a 250 mg capsule. I think BulkSupplements.com also sell pure glutathione in 500mg capsules, but talk to them before ordering and make sure there are no excipients in it. If you are using these, jump to the Nebulising section.

#### **Bulk Powder:**

If you have bulk reduced glutathione powder, use about 1/8 of a level teaspoon of the glutathione and then about 1/10th that volume of sodium bicarbonate for a 250 mg GSH dose. (Ideally, you want 4 parts glutathione to 1 part bicarb by weight). Again, jump to Nebulising section.

#### **Home-made Nebuliser-Mix Capsules:**

I like the convenience of capsules, and make my own mix and then use the Capsule Machine from BulkSupplements.com (or similar) to encapsulate it. This mix/capsule method is more exact than either of the simple ones above and you know there are no harmful materials in the capsules. They are especially handy when travelling, etc.

#### **Mixing for capsules:**

Grind some of the Sodium Bicarbonate in a mortar and pestle to make a finer powder.

If you have a balance accurate to about 0.5g, weigh out 5 g of the bicarbonate and 20 gm of glutathione for Size 1 capsules, or 7.5 g of the bicarbonate and 30 gm of glutathione for Size 0 capsules.

Then carefully mix it with the glutathione and jump to cap filling.

If you don't have a balance, use these measures:

Slightly overfill a 1/2 teaspoon metric measure with sodium bicarbonate and add it to a bowl.

Grind some of the Glutathione (GSH) in the mortar and pestle lightly to break up any lumps.

Slightly press it into a metric tablespoon, level it and add to the bowl. Do this twice so you add two



tablespoons of GSH.

Grind the mix again and then blend thoroughly with a teaspoon. This should give you close to a 4 to 1 mix by weight.

Store any excess GSH in a fridge.

### **Capsule Filling Procedure:**

Fit empty capsules as per the capsule machine instructions.

Spoon mix into base and use the back of a teaspoon to push it into the capsules. Use the tamper to compress the powder. Repeat this cycle four times.

Use card to scrape excess into the bowl.

Following the machine instructions, press the cover onto the base, but do not press on the insert in the cover. Follow their instructions to eject the capsules into a bowl. You can press the capsules together tighter as you transfer them to a bottle if you want.

The above measured amounts will make about 1.5 batches of 24 Size 1 capsules or one batch of 24 Size 0 and the weighed amounts about three Size 1 capsule batches. It takes me a bit over ten minutes to make a batch of 24 capsules.

### **How Much Glutathione to Take?**

The mix formulation is based on "Effect of Inhaled Buffered Reduced Glutathione on the Clinical Status of Patients With Cystic Fibrosis" (Bishop, 2005)

The paper's full dosage/day was 66mg glutathione (GSH)/kg body weight. For a 70kg person this is 4620 mg. This is far larger than my own dosage using Size 1 capsules of 220mg GSH taken 2 or 3 times a day (440 to 660 mg/day), which I find quite effective. I find that larger doses are counterproductive for me, and increase my coughing and sputum. I am about average build. It is possible that people who are larger and/or have more severe COPD may benefit from larger dosages, as below:

Size 1 capsules give a dose of about 220 mg GSH. Taken one by 3 times a day would be 660mg/day. Size 0 capsules would give a larger dose, about 315 mg GSH. Taken 3 times a day would be 945mg/day. I have never taken this much, so I am not sure what it's effects would be. But I think one should always use the smallest amount that is beneficial. The huge doses worked well for people with cystic fibrosis, but that is a different disease, and even then smaller doses may have been better, especially over a longer time. As your COPD improves, you may be able to reduce your dosage. (And read Modified Nebuliser below, which will allow you to half all of the above amounts.)

These home-made 'nebuliser-mix' capsules are also better for use sublingually than the adulterated commercial capsules.

### **Nebulising Glutathione:**

Make the nebulising solution just before nebulising as it will begin to deteriorate once dissolved.

Tip the powders or capsule contents directly into the cup of the nebuliser. Add the sodium bicarbonate as explained above if you are using pure glutathione capsules. Dissolve it in about 3.5ml of filtered, boiled and cooled water, using a 5ml syringe to measure the water for each 250 mg of GSH. The mix should froth up and then mostly settle in a few seconds. Then swirl it gently a couple of times and it should froth slightly and then become a clear solution in another few seconds. If the solution is still cloudy, you probably have a batch of glutathione containing an excipient which may be dangerous to your lungs as noted above and it should NOT be inhaled. It can only be swallowed.

Nebulising 250 mg takes about 10 to 15 minutes. Inhale deeply through your mouth and exhale through your nose to maximise the benefit. This method is especially helpful if you also have COPD like me and can be done up to 4 times a day. Rinse the nebuliser and syringe with warm/hot water, disassemble and allow to dry after each use.

**Modified Nebuliser:** The nebuliser normally works the entire time it is turned on, meaning that the nebulised drug is merely pumped into the room while you are pausing before exhaling, exhaling and pausing before inhaling again. This is wasteful and my family dislike the smell of the glutathione in the room. I estimate that only about 45% of it is actually inhaled. I have found a very simple way to modify your nebuliser to make it more efficient at introducing the nebulised solution into your lungs. About 600 to 700 mm down the air supply tube from the mask, drill a 1.5 mm (1/16 inch) hole in one side of the tube. This will drop the pressure in the nebuliser enough to stop the nebulising.<sup>1</sup> Just before you are about to inhale and while you are inhaling, push on the hole with a finger and it will nebulise normally. I think the useful drug delivery is now about 95% (more than doubled) and the loss to the room has gone from 55% to less than 5%, which doesn't bother anyone. You should half the amount used in the nebuliser to maintain the same effective dose. For example, use half the contents of a Size 1 capsule dissolved in about 1.9 ml of water. It will take twice as long to nebulise each ml of solution as before, so the total time taken will be the same. The hole-covering process will also make you more mindful of your breathing. The only downside is that you need to have one hand free to cover the hole. And if you try it and don't like it, you can plug the hole with a thumb tack or get a replacement tube for about \$12.

If you are using a quiet vibrating screen type nebuliser, you can get the same effect by tilting the top of the nebuliser away from you when not inhaling, which will stop the flow of glutathione until it is tilted back towards you. When delivery from this type of nebuliser slows, placing the cup into almost boiling water for a couple of minutes will usually clear the screen (But check its manual first...).

Also, make sure your kettle is clean inside. When it becomes scaly, the scales will both be inhaled and begin blocking the nebuliser. The scale in the kettle can be dissolved with a 1 to 1 mix of vinegar and water. Bring it to the boil, turn it off immediately and let it almost cool, then swish it around, pour it out and rinse the kettle thoroughly. Check it monthly.

When it begins taking substantially longer to nebulise, check that the nebuliser holes in the cup are not blocked. They can be cleared with a pin or a welder's nozzle cleaner. If that does not help, try replacing the cup. And if that does not help, your nebuliser pump may be wearing out and need replacing (it should last for two or three years. But one warning here: I disassembled my Philips Innosphere Elegance when it became like this (only 18 months old) and discovered the piston seal membrane had been disintegrating, which likely meant that I had been inhaling particles from the seal, as there is no filter between the output from the piston and you. I suspect that this is not good for our lungs, so I now have a P2 filter built into the tube to the nebuliser cup, and recommend you do the same.).

Also, if you have COPD, when not nebulising, try to always breath in and out through your nose so the air you inhale is filtered, warmed and humidified by your sinuses and the air you exhale resets your sinuses. Also try holding your breath when your lungs are full for a second or two to increase oxygen and CO2 transfers.

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<sup>1</sup> If your cup is still nebulising with the hole uncovered, you may need to push the drill bit in and out a few times to clear the hole, or even make a slightly larger diameter hole.

**Some valuable links:**

Dr. Chris Shade on New Methods of Mercury Testing and Detox IAOMT 2010 San Diego U-tube video.  
<http://articles.mercola.com/sites/articles/archive/2013/01/13/mercury-detoxification-protocol.aspx>

**And Some Interesting Reads:**

- Gut, by Giulia Enders
- The Clever Guts Diet, by Dr. Michael Mosley
- The Brain’s Way of Healing, by Norman Doidge
- Brain Maker, by David Perlmutter
- When Smoke Ran Like Water, by Devra Davis
- Tainted Earth, by Marianne Sullivan
- Deceit and Denial, by Gerald Markowitz and David Rosner
- The End of Alzheimer’s, by Dr. Dale Bredeesen
- Dissolving Illusions, by Suzanne Humphries and Roman Bystryanyk
- The Omnivore’s Dilemma, by Michael Pollan
- In the Beginning, by Walt Brown (also available free online.)

**Costs of the Various Detox Protocols In AUD:**

<b>Protocol</b>	<b>Appendix</b>	<b>Monthly</b>	<b>Annual</b>
<b>Full Detox 45+</b>	<b>Text</b>	<b>219</b>	<b>2667</b>
<b>Detox 45+ Reduced</b>	<b>2</b>	<b>110</b>	<b>1339</b>
<b>Full Detox &lt;45</b>	<b>3</b>	<b>151</b>	<b>1840</b>
<b>Detox &lt;45 Reduced</b>	<b>4</b>	<b>89</b>	<b>1080</b>
<b>COPD and IBS Post-Detox</b>	<b>5</b>	<b>101</b>	<b>1230</b>
<b>COPD Only</b>	<b>6</b>	<b>56</b>	<b>677</b>

If you use a modified nebulizer, you can reduce your glutathione costs by about \$90 per year.

You will also need to purchase a nebuliser (\$70 to \$120) if you don't have one, and perhaps a capsule machine (\$20).

I have not tested this protocol on a child or young teenager, and strongly recommend discussing this with your toxicologist first.

## **Appendix 2: Heavy Metal Detox Protocol -Reduced Costs**

For a mid-40s plus person with COPD and IBS.

### **Breakfast:**

Take nebulised glutathione before or after breakfast. (See notes above...)

Before meal: 1 by 1000 mcg of methyl B12 taken sublingually (ie- let it dissolve under your tongue.)

Early during meal (taken with orange or carrot juice containing 1/4 tsp MSM powder and 1/8 tsp prebiotic powder): 1 capsule digestive enzymes, 1 x 600mg kelp capsule, 1 multi-vitamin-mineral tablet, 1 chlorella tablet and 1 x Zinc capsule. Plus 1 eggshell membrane capsule on odd calendar days.

With meal: 1 dessertspoon psyllium husks on breakfast cereal (or in the juice).

### **Lunch:**

Before lunch: Reduced glutathione powder -either one 250 mg capsule, or 250 mg of pure glutathione from bulk powder on a teaspoon (1/8th of a teaspoon) - taken sublingually or nebulise if convenient.

Early during meal (with water or carrot/veggie juice): 1 capsule digestive enzymes, 1 calcium & magnesium tablet, 1 chlorella tablet & 1 x 500mg vitamin C tablet. Plus 1 Alpha-Lipoic Acid capsule on even calendar days.

### **Dinner:**

Early during meal: 1 capsule digestive enzymes,, 1 kelp capsule, 1 cod liver oil capsule, 1 x 1000 IU vitamin D3 tablet, 1 x 600mg NAC capsule, 1 x 400IU vitamin E capsule, 1 x selenium capsule, 1 chlorella tablet and 1 x CoQ10 capsule.

### **During the Late Afternoon or Evening:**

Take nebulised glutathione (See notes above...)

Procedure for a 40+ adult with COPD and IBS, after Heavy Metal Detox.

Assumes the use of glutathione three times a day.

May take up to two years to gently detox with this procedure.

### **Appendix 3: Full Heavy Metal Detox Protocol -Younger Person**

For a person up to their mid-40s without COPD and IBS.

#### **Breakfast:**

Take nebulised glutathione before or after breakfast. (See notes above...)

15 minutes before meal: 1 by 1000 mcg of methyl B12 taken sublingually (ie- let it dissolve under your tongue.) Stir ½ pouch of lyposomal glutathione into about 1/5 of a cup of juice.

Early during meal (taken with orange or carrot juice containing 1/4 tsp MSM powder, 1/8 tsp prebiotic powder and 1ml Sea Minerals): 1 x 600mg kelp capsule, 1 multi-vitamin-mineral tablet, 4 chlorella tablets, 1 cod liver oil capsule and 1 x Zinc capsule.

With meal: 1 dessertspoon psyllium husks on breakfast cereal (or in the juice).

#### **Lunch:**

Before lunch: Reduced glutathione powder -either one 250 mg capsule, or 250 mg of pure glutathione from bulk powder on a teaspoon (1/8th of a teaspoon) - taken sublingually or nebulise if convenient.

Early during meal (with water or carrot/veggie juice): 1 calcium & magnesium tablet, , 4 chlorella tablets & 1 x 500mg vitamin C tablet. Plus 1 Alpha-Lipoic Acid capsule on even calendar days.

#### **Dinner:**

Early during meal: 1 kelp capsule, 1 cod liver oil capsule, 1 x 1000 IU vitamin D3 tablet, 1 x 600mg NAC capsule, 1 x 400IU vitamin E capsule, 1 x selenium capsule and 4 chlorella tablets.

#### **During the Late Afternoon or Evening:**

Take nebulised glutathione (See notes above...)

Procedure for an adult up to 45 without COPD and IBS.

Assumes the use of glutathione three times a day.

May take up to two years to gently detox with this procedure.

## **Appendix 4: Heavy Metal Detox Protocol -Younger Person -Reduced Cost**

For a person up to their mid-40s without COPD and IBS.

### **Breakfast:**

Take nebulised glutathione before or after breakfast. (See notes above...)

15 minutes before meal: 1 by 1000 mcg of methyl B12 taken sublingually (ie- let it dissolve under your tongue.)

Early during meal (taken with orange or carrot juice containing 1/8 tsp MSM powder): 1 x 600mg kelp capsule, 1 multi-vitamin-mineral tablet, 2 chlorella tablets and 1 x Zinc capsule.

With meal: 1 dessertspoon psyllium husks on breakfast cereal (or in the juice).

### **Lunch:**

Before lunch: Reduced glutathione powder -either one 250 mg capsule, or 250 mg of pure glutathione from bulk powder on a teaspoon (1/8th of a teaspoon) - taken sublingually or nebulise if convenient.

Early during meal (with water or carrot/veggie juice): 1 calcium & magnesium tablet, , 2 chlorella tablets & 1 x 500mg vitamin C tablet. Plus 1 Alpha-Lipoic Acid capsule on even calendar days.

### **Dinner:**

Early during meal: 1 kelp capsule, 1 cod liver oil capsule, 1 x 1000 IU vitamin D3 tablet, 1 x 600mg NAC capsule, 1 x 400IU vitamin E capsule, 1 x selenium capsule and 2 chlorella tablets.

### **During the Late Afternoon or Evening:**

Take nebulised glutathione (See notes above...)

### **Before Bed:**

Take nebulised glutathione (See notes above...)

Procedure for an adult up to 45 without COPD and IBS.

Assumes the use of glutathione four times a day.

May take up to two years to gently detox with this procedure.

## **Appendix 5: COPD and IBS Post-Detox Protocol**

For a mid-40s plus person with COPD and IBS.

### **Breakfast:**

Take nebulised glutathione before or after breakfast. (See notes above...)

Before meal: 1 by 1000 mcg of methyl B12 taken sublingually (ie- let it dissolve under your tongue.)

Early during meal (taken with orange or carrot juice containing 1/2 tsp MSM powder and 1/4 tsp prebiotic powder): 1 capsule digestive enzymes, 1 x 600mg kelp capsule, 1 multi-vitamin-mineral tablet, 1 eggshell membrane capsule and 1 x Zinc capsule on odd calendar days. One teaspoon of olive leaf extract after breakfast on odd days.

With meal: 1 dessertspoon psyllium husks on breakfast cereal (or in the juice).

### **Lunch:**

Before lunch: Reduced glutathione powder -either one 250 mg capsule, or 250 mg of pure glutathione from bulk powder on a teaspoon (1/8th of a teaspoon) - taken sublingually or nebulise if convenient.

Early during meal (with water or carrot/veggie juice): 1 capsule digestive enzymes & 1 x 500mg vitamin C tablet. Plus 1 Alpha-Lipoic Acid capsule and 1 calcium & magnesium tablet on even days.

### **Dinner:**

Early during meal: 1 capsule digestive enzymes,, 1 kelp capsule, 1 cod liver oil capsule, 1 x 1000 IU vitamin D3 tablet and 1 x 600mg NAC capsule. On odd days, also take 1 x 400IU vitamin E capsule, 1 x selenium capsule, 1 x multi-vitamin-mineral tablet and 1 x CoQ10 capsule.

### **During the Late Afternoon or Evening:**

Take nebulised glutathione (See notes above...)

Procedure for a 40+ adult with COPD and IBS, after Heavy Metal Detox.

Assumes the use of glutathione three times a day.

## **Appendix 6: COPD Only Protocol**

For a mid-40s plus person with COPD.

### **Breakfast:**

Take nebulised glutathione before or after breakfast. (See notes above...)

Before meal: 1 by 1000 mcg of methyl B12 taken sublingually (ie- let it dissolve under your tongue.)

Early during meal (taken with orange or carrot juice containing 1/4 tsp MSM powder): 1 x 600mg kelp capsule and 1 multi-vitamin-mineral tablet.

With meal: 1 dessertspoon psyllium husks on breakfast cereal (or in the juice).

### **Lunch:**

Before lunch: Reduced glutathione powder -either one 250 mg capsule, or 250 mg of pure glutathione from bulk powder on a teaspoon (1/8th of a teaspoon) - taken sublingually and/or nebulise if convenient.

Early during meal (with water or carrot/veggie juice): 1 x 500mg vitamin C tablet. Plus 1 Alpha-Lipoic Acid capsule and 1 calcium & magnesium tablet on even days.

### **Dinner:**

Early during meal: 1 kelp capsule, 1 cod liver oil capsule, 1 x 1000 IU vitamin D3 tablet and 1 x 600mg NAC capsule. On odd days, also take 1 x 400IU vitamin E capsule, 1 x multi-vitamin-mineral tablet and 1 x CoQ10 capsule.

### **During the Late Afternoon or Evening:**

Take nebulised glutathione (See notes above...)

Procedure for a person over 45 who does not have IBS and has completed detox procedure.

Recent ex-smokers have a large burden of toxins, and should do the full detox for six to twelve months.

Assumes nebulising 3 times a day using home-made Size 1 glutathione capsules.

Initial cost can be lower if you purchase a smaller container of glutathione powder. I use the 250 gm package, which is enough for over six months.